

Abstract of the Disclosure

A rotating antenna is used in a wireless system to impart a phase onto a received signal by electronically moving the effective receiving antenna location along a circular path such that the modulation phase angle indicates the bearing of the radio transmission and the gain of a signal transmitted by the antenna is increased in the direction of the received signal to enhance the link between transmitter and receiver. _____

— In order to simulate a rotating antenna, the antenna preferably comprises an antenna array having a plurality of antennae for use by one receiver. During reception of a signal from a remote transmitter, a scanner is adapted to scan through the plurality of antennae and in turn provide a signal received from each of the plurality of antennae to the receiver in the wireless system. The signal is modulated by virtue of the antenna rotation to include a Doppler frequency component. Determination of this frequency component enables a receiver to determine the bearing of a received signal and allows the receiver antenna to simulate a highly directional antenna in a transmit mode by operation of the antenna array as a phased array with increased gain in the direction of the received signal.

R.F.C.
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